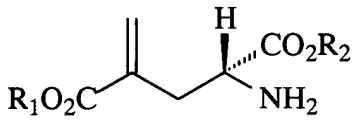
What Is Claimed Is:

1. A process for synthesizing substantially enantiomerically pure 4-methylene-L-glutamic acid and esters thereof having the formula



wherein R_1 and R_2 are individually hydrogen or C_1-C_6 alkyl, said process comprising the steps of:

a. providing a (2S)-pyroglutamic acid or ester thereof as a starting material;

b. converting the starting material to a 4-enamine pyroglutamic acid intermediate or ester thereof;

c. hydrolyzing the 4-enamine intermediate to a 4-hydroxymethylidene pyroglutamic acid intermediate or ester thereof; and

d. reducing the 4-hydroxymethylidene intermediate to a 4-methylene pyroglutamic acid or an ester thereof;

e. reacting the 4-methylene pyroglutamic acid with a strong base to form linear 4-methylene glutamic acid, or esters and salts thereof.

2. The process of Claim 1 wherein step b includes reacting the starting material with an amide or an acetal.

3. The process of Claim 2 wherein step b includes reacting the starting material with an acetal at a temperature ranging from 70° C to 130° C.

4. The process of Claim 1 wherein step c includes reacting the 4-enamine intermediate with a strong acid.

5. The process of Claim 1 wherein step d includes reacting the 4-hydroxymethylidene intermediate with a carbonate salt.

6. The process of Claim 1 wherein the strong base is lithium hydroxide.

7. The process of Claim 3 wherein the temperature ranges is from 105° C to 115° C.